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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,102	03/23/2004	Ricky A. Massey	P68924US0	1874

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JACOBSON HOLMAN PLLC
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WASHINGTON, DC 20004

EXAMINER

TORRES, ALICIA M

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,102

Applicant(s)

MASSEY ET AL.

Examiner

Alicia M Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-19 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Abstract

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Specifically, U.S. Pat. No. 5,287,687 and U.S. Pat. No. 6,058,690 have not been cited in a form PTO-1449.

Claim Objections

3. Claim 1 is objected to because of the following informalities: the word "then" in line 11 should be changed to —then—. Appropriate correction is required.

Claim 11 is objected to because of the following informalities: there is lack of antecedent basis for "said disks". Appropriate correction is required.

Claim 16 is objected to because of the following informalities: it appears “upward and longitudinal of said” in line 20 is incomplete. Appropriate correction is required.

DETAILED ACTION

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 8, 9-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Urich et al., hereafter Urich.

6. In regards to claims 1, 2, 4, 8 and 9, Urich discloses a pepper harvester (10) comprising an operator controlled vehicular structure capable of self propulsion along rows of pepper plants having mature pods thereon, the vehicular structure including a forwardly extending header (20) with generally parallel row picking units (30, 32, 34, 36) mounted thereon, each picking unit (30, 32, 34, 36) comprising a plurality of generally parallel picking bars (30A, 32A, 34A, 36) moving in an orbital path in a hay raking motion, a rotatable support member (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) connected to each of the forward and rearward ends of the picking bars (30A, 32A, 34A, 36A), a plurality of picking fingers (30B, 32B, 34B, 36B) extending from one side of each of the picking bars (30A, 32A, 34A, 36A), the picking bars (30A, 32A, 34A, 36A) being oriented with the leading end lower than a trailing end (see figure 5) with each of the bars (30A, 32A, 34A, 36A) being moved longitudinally during rotation of the rotatable support

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members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) a distance equal to the diameter of the rotational movement of each end of the picker bars (30A, 32A, 34A, 36A) to move the picking fingers (30B, 32B, 34B, 36B) an increment of vertical and longitudinal movement during each cycle of orbital movement, the picking fingers (30B, 32B, 34B, 36B) on the picking bars (30A, 32A, 34A, 36A) being disposed in opposed relation to enter a pepper plant from opposite sides at a lower elevation, the tip ends of opposed picking fingers (30B, 32B, 34B, 36B) being spaced from each other when moving upwardly in relation to pepper plants as the picking units (30, 32, 34, 36) move forwardly thereby enabling the pepper plant and branches to be pulled through the space between the picking fingers (30B, 32B, 34B, 36B) to remove pepper pods from the pepper plants, the orbital movement of the picking bars (30A, 32A, 34A, 36A) and picking fingers (30B, 32B, 34B, 36B) and the rotational speed of the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) being such that the picking fingers (30B, 32B, 34B, 36B) move vertically in relation to the pepper plants as the picking fingers (30B, 32B, 34B, 36B) move in an orbital path in relation to the pepper plants, as per claim 1; and

wherein said rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) are lightweight circular disks, each of said picking bars (30A, 32A, 34A, 36A) being of hollow rigid construction and each of said picking fingers (30B, 32B, 34B, 36B) being of tapered resilient construction (see column 5, lines 24-26), as per claim 2; and

wherein said picking fingers (30B, 32B, 34B, 36B), said picking bars (30A, 32A, 34A, 36A) and rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) are inclined upwardly toward said pepper plants to form an inclined path of movement for peppers removed from the pepper plants, as per claim 4; and

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wherein said picking unit (30, 32, 34, 36) includes forwardly extending, outwardly inclined guides (40) spaced laterally from each other to provide an unobstructed access to said opposed picking fingers (30B, 32B, 34B, 36B), said picking fingers (30B, 32B, 34B, 36B) said picking bars (30A, 32A, 34A, 36A) are inclined upwardly to convey peppers picked from pepper plants transversely of said picking bars (30A, 32A, 34A, 36A) and fingers (30B, 32B, 34B, 36B) into a longitudinal conveying structure (31) alongside said picking unit (30, 32, 34, 36) to convey peppers to a rearward portion of said header (20), as per claim 8; and

wherein all of said picking bars (30A, 32A, 34A, 36A) on each row picking unit (30, 32, 34, 36) are driven from a single motor (37A, 37B, 37C, 37D) driving a plurality of rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) connected to rearward ends of said picking bars (30A, 32A, 34A, 36A), as per claim 9.

7. In regards to claims 10-14, Urich discloses a harvester (10) for removing pod-like products from plants comprising a powered, operator controlled vehicle, a header (20) supported from the vehicle and extending forwardly thereof, spaced picking means (30, 32, 34, 36) mounted on the header (20), the picking means (30, 32, 34, 36) comprising longitudinally spaced apart rotatably driven support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E), a plurality of elongated picking bars (30A, 32A, 34A, 36A) connected to and extending between the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E), a plurality of spaced fingers (30B, 32B, 34B, 36B) secured to the bars (30A, 32A, 34A, 36A) and projecting laterally therefrom, the bars (30A, 32A, 34A, 36A) being inclined longitudinally with a forward end positioned lower than a rearward end such that the fingers (30B, 32B, 34B, 36B) on the bars

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(30A, 32A, 34A, 36A) move towards each other and simultaneously move upwardly when moving to the rear so as to engage the pod-like products and separate them from the plants on which they grow, the bars (30A, 32A, 34A, 36A), fingers (30B, 32B, 34B, 36B) thereon and rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) being parallel and inclined upwardly and toward the plants to move the bars (30A, 32A, 34A, 36A) and fingers (30B, 32B, 34B, 36B) thereon in an orbital inclined path and conveyor means (31) conveying the pod-like products away from the picking means (30, 32, 34, 36), as per claim 10; and

wherein said disks (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) are connected by a plurality of picking bars (30A, 32A, 34A, 36A) eccentrically connected to said disks (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) such that the bars (30A, 32A, 34A, 36A) are moved in an orbital path with a portion of the plants being picked when the bars (30A, 32A, 34A, 36A) are moving toward the rear of the header (20), as per claim 11; and

wherein the picking bars (30A, 32A, 34A, 36A) are moved rearwardly and upwardly when opposed bars (30A, 32A, 34A, 36A) and fingers (30B, 32B, 34B, 36B) are moved rearwardly with the rearward movement of the picking bars (30A, 32A, 34A, 36A) and picking fingers (30B, 32B, 34B, 36B) thereon moving a distance equal to the diameter of the rotational movement of the connection between the ends of the picking bars (30A, 32A, 34A, 36A) and the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E), as per claim 12; and

wherein each picking bar (30A, 32A, 34A, 36A) includes an increment of longitudinal movement and lateral inward and outward movement equal to the diameter of rotational movement of the connections between the ends of the picking bars (30A, 32A, 34A, 36A) and

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the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E), as per claim 13; and

wherein the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) are lightweight disks, the picking bars (30A, 32A, 34A, 36A) are tubular structural members of rigid construction and the picking fingers (30B, 32B, 34B, 36B) being inclined at an angle such that pod-like products will roll from one picking bar (30A, 32A, 34A, 36A) to adjacent picking bars (30A, 32A, 34A, 36A) as the picking bars (30A, 32A, 34A, 36A) oscillate in their orbital path of movement, as per claim 14.

8. In regards to claim 15, Ulrich discloses a method of harvesting peppers from pepper plants comprising the steps of providing picking fingers (30B, 32B, 34B, 36B) disposed on opposite sides of a row of plants, moving the fingers (30B, 32B, 34B, 36B) in an orbital path in a manner such that the fingers (30B, 32B, 34B, 36B) move upwardly and toward each other to engage the peppers and separate them from the plants, the fingers (30B, 32B, 34B, 36B) on opposite sides of the plants being mounted on an elongated picker bar (30A, 32A, 34A, 36A) having a plurality of the fingers (30B, 32B, 34B, 36B) secured thereto, a pair of rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) connected to the ends of each picking bar (30A, 32A, 34A, 36A) with the ends of the picking bar (30A, 32A, 34A, 36A) being eccentrically connected to the support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E), picking bars (30A, 32A, 34A, 36A) and rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) being inclined upwardly and outwardly to move the picking bars (30A, 32A, 34A, 36A) and fingers (30B, 32B, 34B, 36B) toward the plant and simultaneously move

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upwardly and then move away from the plant and then simultaneously move away from the plant and downwardly and inclining downwardly and outwardly to pick peppers from the plants and transfer them laterally and downwardly onto a longitudinal conveying (31) means to convey the peppers to a cleaner assembly.

9. In regards to claims 16-19, Ulrich discloses a picking unit for harvesting pod products from row plants comprising at least one pair of parallel picking bars (30A, 32A, 34A, 36A) oriented on opposite sides of a row of plants, a driven rotatable support member (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) at each end of each picking bar (30A, 32A, 34A, 36A), each picking bar (30A, 32A, 34A, 36A) including forward and rearward ends connected to the support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) in equally spaced relation to an axis of rotation of each rotatable support member (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) to move the picking bars (30A, 32A, 34A, 36A) in an orbital path on opposite sides of a row of plants, a plurality of laterally extending picking fingers (30B, 32B, 34B, 36B) on each picking bar (30A, 32A, 34A, 36A) such that the fingers (30B, 32B, 34B, 36B) on each bar (30A, 32A, 34A, 36A) move cyclically toward and away from and longitudinally in relation to a row of plants, the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) at rearward ends of the picking bars (30A, 32A, 34A, 36A) being located above the rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) at forward ends of the bars (30A, 32A, 34A, 36A) such that the picking fingers (30B, 32B, 34B, 36B) move vertically upwardly during longitudinal movement thereof when the picking fingers (30B, 32B, 34B, 36B) have been moved toward each other and toward a row of plants to extend under pod products on a row of plants

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thereby moving the fingers (30B, 32B, 34B, 36B) vertically to engage and move pod products upwardly and separate the pod product from the plants in a row as the picking unit is moved longitudinally along a row of plants, the picking fingers (30B, 32B, 34B, 36B) on the opposed picking bars (30A, 32A, 34A, 36A) having opposed tip ends spaced apart to enable passage of plant stems in a row of plants to pass therebetween during upward and longitudinal of the picking fingers (30B, 32B, 34B, 36B) when the picking bars (30A, 32A, 34A, 36A) and picking fingers (30B, 32B, 34B, 36B) are moving in that part of the orbital path in closest opposed relation to remove pod products from a row of plants by moving opposed picking fingers upwardly through the plants, as per claim 16; and

Wherein the picking fingers (30B, 32B, 34B, 36B), said picking bars (30A, 32A, 34A, 36A) and said rotatable support member (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) incline upwardly and toward the tip ends of the fingers (30B, 32B, 34B, 36B) thereof to provide and inclined support for pods removed from a row of plants for moving the pods laterally toward a conveying structure (31) parallel to and below the picking bars (30A, 32A, 34A, 36A) and the tip ends of the fingers (30B, 32B, 34B, 36B) that are moving forwardly the opposed picking bars (30A, 32A, 34A, 36A) for discharge into a conveyor structure (31), as per claim 17; and

Wherein the picking bars (30A, 32A, 34A, 36A) are inclined longitudinally, as per claim 18; and

Wherein the picking fingers (30B, 32B, 34B, 36B), picking bars (30A, 32A, 34A, 36A) and rotatable support members (30D, 32D, 34D, 36D and 30E, 32E, 34E, 36E) are inclined laterally about 10° to 15°, as per claim 19.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ulrich in view of Cosimati.

The device is disclosed as applied above. However, Ulrich fails to disclose wherein the rotatable support members are driven by a hydraulic motor that is safely stopped if the harvester becomes jammed.

Cosimati discloses a similar pepper harvester wherein the coil drive is provided by a hydraulic driven motor that is safely stopped if the harvester becomes jammed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the hydraulic drive of Cosimati on the harvester of Ulrich in order to optimize picking efficiency.

Allowable Subject Matter

12. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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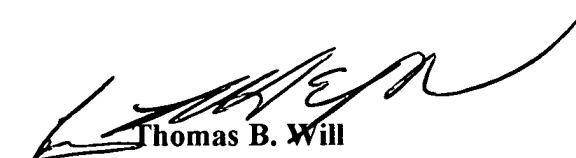
Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rutt et al., Smith Jr. Et al., and Boese have been cited as of interest.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Torres whose telephone number is 703-305-6953. The examiner can normally be reached Monday through Thursday from 7:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at 703-308-3870.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703-305-1113. The fax number for this Group is 703-872-9306.


Thomas B. Will
Supervisory Patent Examiner
Group Art Unit 3671

AMT
August 16, 2004